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SANTA BARBARA • SANTA CRUZ

COLLEGE OF ENGINEERING
SANITARY ENGINEERING
RESEARCH LABORATORY
RICHMOND FIELD STATION

1301 SOUTH 46TH STREET
RICHMOND, CALIFORNIA 94804

11 January 1966

J. Morrison Brady, M. D.
Associate Scientific Director
The Council for Tobacco Research - U. S. A.
633 Third Avenue
New York, New York 10017

Dear Dr. Brady:

Enclosed is a copy of the research proposal I discussed with you over the telephone when you were in Seattle. It is concerned with the development of a bioassay screening technique for carcinogenic activity of compounds available only in minute quantities, such as atmospheric pollutants. The proposal was submitted to the Cancer Research Coordinating Committee, University of California (USPHS), of which Dr. K. B. DeOme is the Executive Secretary. Also enclosed is a copy of the letter postponing any further consideration for financial assistance until the regular spring meeting which occurs in early May.

Dr. Chen and I were in to see Dr. DeOme yesterday to clarify the position of the proposal. In summary he stated that the proposed work dealt primarily with the use of microorganisms as the "test animals" in the analysis. He felt that emphasis should be shifted to the establishment of a bridge between conventional assay techniques, i. e., the direct application of relatively gross amounts of test materials into mice and the proposed microbiological technique. In fact he stated that monies would most likely have been provided if we had indicated more interest in work on the bridge between the conventional and microbiological techniques.

We discussed this bridge work in some detail and concluded that emphasis in our work for the next few months should be shifted in this direction. Dr. DeOme suggested using the work of Dr. Leo Sachs as the model: Dr. Sachs has reported that the carcinogenic hydrocarbons, benzo(a)pyrene and methyl cholanthrene can directly induce in vitro, using secondary tissue cultures of hamster embryo origin, the transformation of normal cells to tumor cells. Non-carcinogenic hydrocarbons

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J. Morrison Brady, M. D., 1/11/66, page 2:

such as chrysene and pyrene do not cause the transformation. We would apply the technique to a large number of hydrocarbons (See Table I, page 6 under Research Plan) and statistically evaluate the results. Dr. DeOrme has been in personal contact with Dr. Sachs and is very enthusiastic about our checking the work with a large number of compounds. He has indicated that based on his discussions with Dr. Sachs, both a qualitative and quantitative analysis is possible. Copies of the work of Dr. Sachs, et al., are included for your perusal.

As I mentioned in our telephone conversation, the proposed research is an outgrowth of our air pollution project which is concerned with combustion at atmospheric pressure and the analysis of combustion products. We have separated from the atmosphere a large number of pollutants in minute quantities that fall in the same hydrocarbon class as benzo(a)pyrene but are still unidentified. The proposed project is without funds and I have managed to meet the salary of Dr. Chen on a monthly basis and have reached the end of my resources.

Dr. Chen received his Ph.D. in microbiology in June of 1965 and has taken this work on in a postdoctorate capacity. Of necessity I will have to close the project unless it is possible to receive some immediate financial help to carry the salary of Dr. Chen through June of 1966. I am firmly convinced that we will be able to obtain support monies shortly through more conventional channels as the project has shown considerable progress and merit to date. This is actually a cry for help before the project closes. I do not believe I could find another microbiologist interested enough to work as part of our research group to carry this phase of air pollution work along.

I have turned to you for help because of a parallel need in the tobacco industry for an assay technique applicable to the minute quantities of material that might be encountered in tobacco smoke.

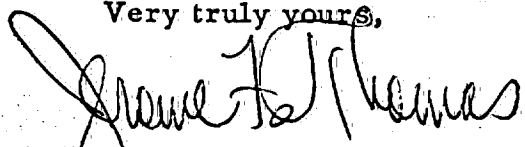
Please feel free to call and discuss the problem in greater detail if you feel it warrants consideration on your part. I would also like to repeat my invitation to visit our campus and air pollution research facilities during your stay in San Francisco in May. Perhaps a luncheon at the Faculty Club can be arranged. Incidentally, I will be in New York to present a paper related to air pollution at the TAPPI (Paper & Pulp) meeting at the Hilton Hotel during the week of 21 February if you would care to discuss any phase of the proposed work.

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J. Morrison Brady, M. D., 1/11/66, page 3:

The amount of money requested is the first item under VI Budget (\$6,100.00). Supply and expense money can be drawn from another source.

Very truly yours,



Jerome F. Thomas, Ph. D.
Professor of Sanitary Chemistry
University of California (Berkeley)
Th 5-6000, Ext. 3269

JFT:fkf

Enclosure

cc - Dr. K. B. DeOme

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